FOREST STATISTICS FOR KLAMATH COUNTY, OREGON

U. S. Forest Service. Pacific Northwest Forest Experiment Station

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE
PACIFIC NORTHWEST FOREST EXPERIMENT STATION

ADDRESS REPLY TO
DIRECTOR
AND REFER TO

424 U. S. COURT HOUSE
MAIN AND SIXTH STREETS
PORTLAND, OREGON

R-NW
Forest Survey

February 25, 1936

California Forest Experiment Station,
331 Giannini Hall,
Berkeley, Calif.

Dear Sir:

The Forest Survey of eastern Oregon and eastern Washington is now nearing completion and results are being prepared for distribution. The comprehensive methods employed in this survey make possible the issuance of exhaustive data both in map and statistical form concerning the forest resources of this region. Information has been obtained on the amount of saw-timber, on the area of forest types, on the stocking of the immature types, and on the area of each site quality.

A report giving the essential basic inventory facts, will be prepared for each county as soon as possible after field work is completed. This report will contain tables and charts showing the volume of saw-timber by species and ownership, area of forest cover types by ownership, area of site quality classes, and an analysis of these and related data.

I enclose a copy of the report for Klamath County, Oregon, for your files together with an explanatory text. For forest units embracing two or more counties, additional statistics and textual discussion of the inventory, of growth and of depletion, together with an economic analysis of the whole forest situation will be published as rapidly as completed.

Forest cover type maps on a scale of 1-inch-to-the-mile have been prepared for all counties in which field work has been completed. Colored lithograph type maps on a scale of $\frac{1}{4}$-inch-to-the-mile will be made in quarters for Oregon and Washington. The lithographed map of the northwestern quarter of Oregon is available for distribution and the map of the southwestern quarter of Oregon will be available within one or two months. Further information regarding these maps and the 1-inch-to-the-mile maps and how they may be obtained will be furnished upon request.

Very truly yours,

Thornton T. Munger

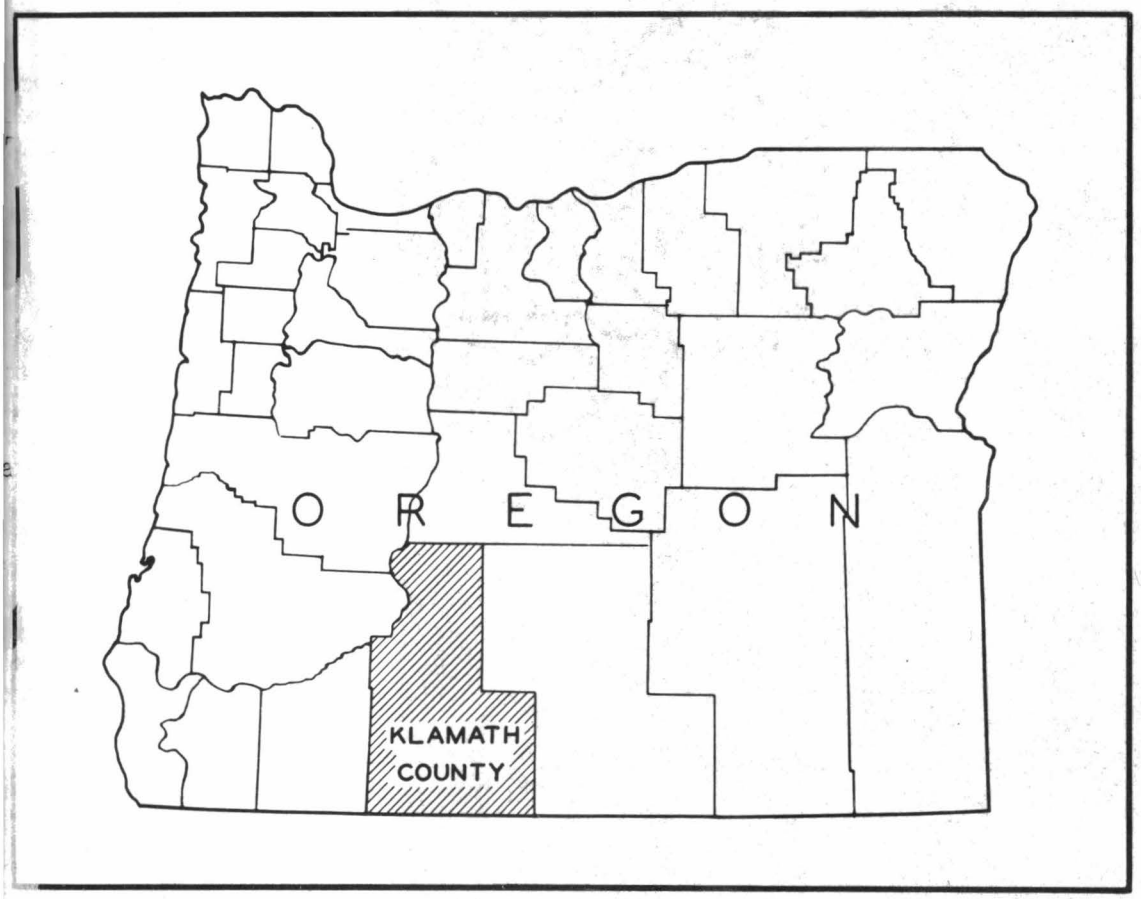
THORNTON T. MUNGER, Director

Enclosure

FOREST STATISTICS FOR KLAMATH COUNTY, OREGON

FROM THE INVENTORY PHASE OF THE FOREST SURVEY
PACIFIC NORTHWEST FOREST EXPERIMENT STATION
FOREST SERVICE U. S. DEPARTMENT OF AGRICULTURE

DATA AS OF NOVEMBER 1, 1934

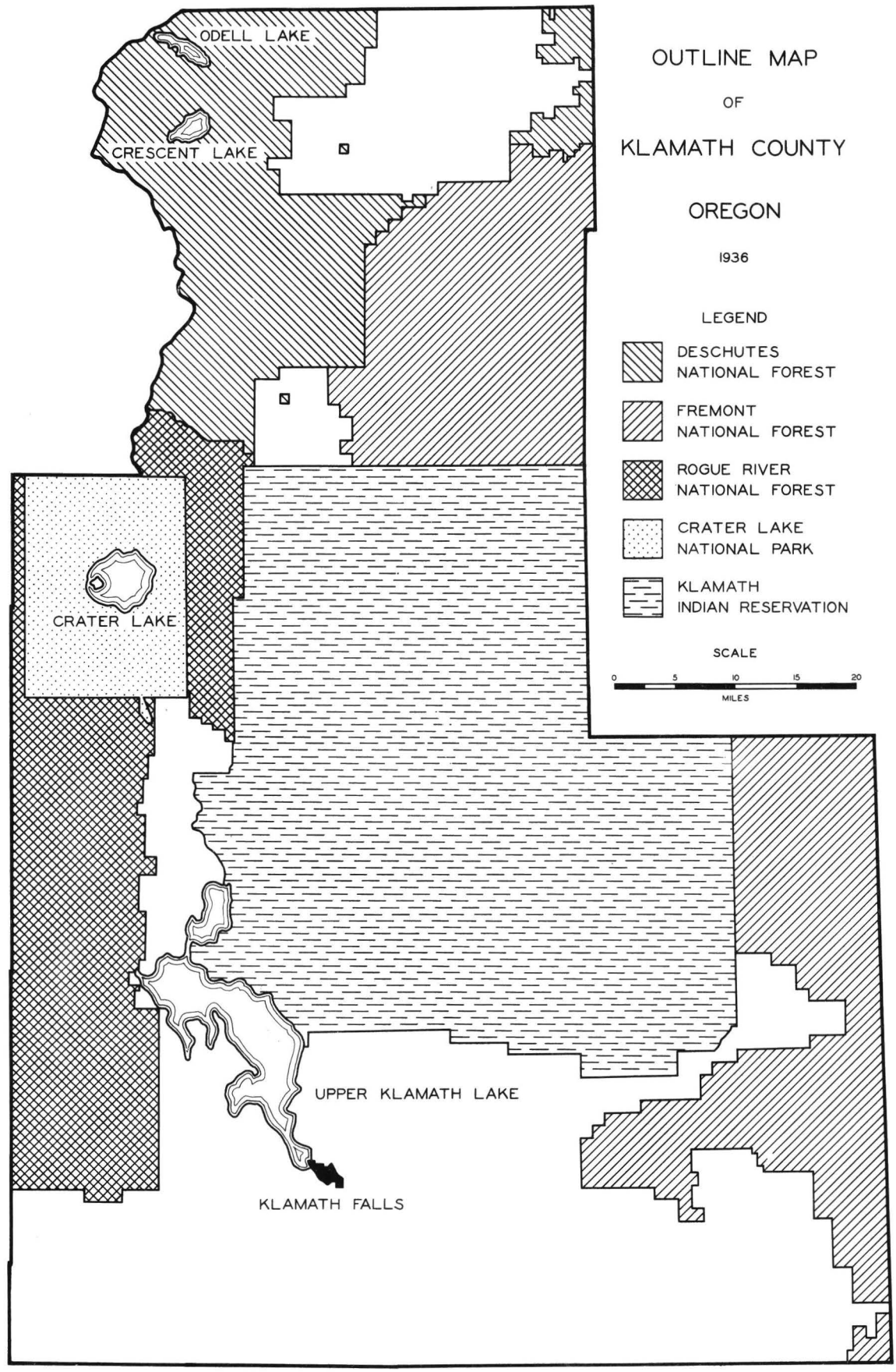


THORNTON T. MUNGER
DIRECTOR

H. J. ANDREWS, IN CHARGE
OF FOREST SURVEY

FIELD AND OFFICE WORK IN CHARGE OF F. L. MORAVETS

PORTLAND, OREGON FEBRUARY 1, 1936


ODELL LAKE
CRESCENT LAKE
CRATER LAKE
UPPER KLAMATH LAKE
KLAMATH FALLS
OUTLINE MAP
OF
KLAMATH COUNTY
OREGON
1936
LEGEND
DESCHUTES NATIONAL FOREST
FREMONT NATIONAL FOREST
ROGUE RIVER NATIONAL FOREST
CRATER LAKE NATIONAL PARK
KLAMATH INDIAN RESERVATION
SCALE
0 5 10 15 20
MILES

Forest Resources of Klamath County, Oregon

This report presents results of a survey of Klamath County, Oregon, made in 1934 by the Forest Service as a part of a national survey of forest resources. It deals primarily with extent and character of forest resources, and secondarily with status of forest industries.

Location and Description of County

Klamath County lies in the south-central portion of Oregon, extending northward from the California line and eastward from the summit of the Cascade Range. It is one of the largest counties in the State, with a total land area of 3,814,445 acres, and is one of the most important as regards forest resources. Its western quarter is rough and broken mountainous country. The remaining three-quarters is a part of the central Oregon plateau, throughout which rise occasional high ridges and buttes. Elevations range from 4,100 feet to 8,938 feet, the height of Mount Scott in Crater Lake National Park. Most of the county's area is drained to the southwest by the Klamath River and its tributaries, the largest of which are Lost River and Sprague River. The northern portion is drained to the north by tributaries of the Deschutes River. Fresh-water lakes are numerous, the largest being Upper Klamath, Crater, Odell, Crescent, Davis, and Agency.

Forest Types

The forests of Klamath County are principally of three generalized types, of which the most widespread and the most important economically is the ponderosa pine type. The zone occupied by this type reaches through the whole north-south extent of the State and from the lower slopes of the Cascade Range on the west to open desert lands on the east. In Klamath County it includes about four-fifths of the total forest-land area and about four-fifths of the total volume of merchantable timber. Over most of it, ponderosa pine occurs in pure or nearly pure stands. On the more moist sites white fir is associated with the pine; toward the south sugar pine and incense cedar, also, are present in some stands. Extensive stands of lodgepole pine occur in portions of the zone, and on the dry pumice soils in the northern part of the county this species frequently occurs as an understory in sparse stands of ponderosa pine.

Almost invariably, the ponderosa pine of this type attains good development, and is of good quality. Its volume usually averages from 10 to 15 M board feet per acre, and on the best sites is considerably greater than that. Only in sparsely stocked stands along the fringe of the desert

is any appreciable proportion of it short and limby. Defect usually averages less than 5 percent. Both the white fir and the sugar pine, particularly the former, are of inferior quality. Defect is due principally to heart rot in white fir and to shake in sugar pine. The lodgepole pine seldom reaches saw-timber size; most of the stands of this species are densely stocked and contain few trees more than 8 inches in diameter at breast height.

Logging in the ponderosa pine zone has been carried on at a fairly rapid rate in recent years, and has covered some 365,000 acres.

The second generalized forest type of the county is the balsam fir-mountain hemlock. This occupies a narrow zone along the higher slopes of the Cascade Range, approximately from the 5,500-foot level to the summit, extending for about three-fourths of the length of the county. Most of the stands of this type consist of various combinations of noble fir, Shasta red fir, white fir, mountain hemlock, and lodgepole pine. In addition all these species, especially lodgepole pine, occur in pure stands over extensive areas. Douglas fir and white pine are frequently found in the mixed stands. Engelmann spruce, alpine fir, and whitebark pine are found in them occasionally at elevations of 7,000 feet or more.

Throughout this zone, the timber is usually of inferior quality. The timber of the mixed stands is generally short and limby and is often defective; usually its merchantable volume averages less than 8 M board feet per acre. The lodgepole pine stands are densely stocked and average from 4 to 10 inches in diameter at breast height. Only on a few small areas of favorable site quality do any of the species attain good development. Stands of nearly pure mountain hemlock occurring in the northern part of the zone average as high as 30 M board feet per acre, and some stands of Shasta red fir in the southern part have volumes nearly as great. Good-quality Douglas fir and white pine occur on some small areas.

These upper-slope forests, although they are of little commercial importance at present, have great value for watershed protection and considerable value for recreation. The balsam fir and mountain hemlock stands constitute a potential supply of pulpwood for which a demand may arise at a later date when more accessible timber has become depleted. It is probable, also, that small quantities of Douglas fir and white pine will be cut for lumber.

The third generalized type is the sugar pine-ponderosa pine. This occupies a zone in the southwestern portion of the county, extending southward from the balsam fir-mountain hemlock zone and continuous with the sugar pine-ponderosa pine zone along the Sierra Nevada in northern California. The type's principal components in this county are ponderosa pine, sugar pine, white fir, Douglas fir, and incense cedar. Mixed stands

in which ponderosa pine predominates are the rule, but a large acreage is occupied by stands composed largely of sugar pine. Stands of this type contain the county's best ponderosa pine and sugar pine timber, which is of excellent quality and high value.

The whole of this zone lies within a 30-mile radius of Klamath Falls, the lumber-production center of the county, and its topography is very favorable for railroad and truck-road construction and for logging. Consequently, exploitation of the pine within it is progressing very rapidly; logging in recent years has covered some 30,000 acres. To date only a very small volume of the minor species--white fir, Douglas fir, and incense cedar--in the mixed stands has been cut with the pine. Usually the white fir and incense cedar are so defective that it is unprofitable to log them. Most of the Douglas fir is of better quality, but not so good that lumber produced from it can successfully compete with Douglas fir lumber produced in western Oregon or western Washington.

Volume of Merchantable Timber

The volume of merchantable timber in the county, by species and ownership classes, is shown in table 1 and figures 1 and 2.[1/] The most outstanding fact disclosed by the table and by figure 1 is that ponderosa pine makes up approximately 76 percent of the total merchantable volume. Another significant fact brought out by the table is the evenness of the division of timber volume among three ownership classes--private, Indian, and national forest; about 34 percent of the total volume is privately owned, about 34 percent is in Indian ownership, and about 27 percent is on national forests.

Forest Type Areas

Approximately 76 percent of the total land area of the county was classified as forest land. The acreages occupied by individual cover types are shown, by ownership classes, in table 2 and the acreages occupied by generalized types are shown in table 3 and figure 3. Outstanding is the large acreage of the ponderosa pine types. Types in which this species occurs either pure or as an important component occupy nearly 56 percent of the county's total forest-land area and approximately 44 percent of its total land area.

Like ownership of saw timber, ownership of forest land is almost evenly divided among the private, Indian, and national-forest classes; about 31 percent of the total forest-land area is included in national forests, about 30 percent is privately owned, and about 27 percent is

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1/ Tables 1-4, and figures 1-3, follow page 6.

owned by the Klamath Indians. The bulk of the remainder is in Federal ownership in the Crater Lake National Park, unappropriated public domain, and revested O. and C. grant land; only a small acreage is in county and State ownership.

Classification of areas as to site quality is shown in table 4.

Cut-over Areas

Ponderosa pine is the only species that has been exploited to any considerable extent in Klamath County, and logging has been confined to stands in which that species predominated. Cut-over areas (all areas from which any material part of the stand had been removed) totaled 396,455 acres. About 46 percent of this total is privately owned, about 38 percent is in Indian ownership, 9 percent is within national forests, and the remainder is in the other public ownership classes. Approximately 330,000 acres of the total was classified as ponderosa pine land, 30,000 acres as stocked with other species, principally white fir, Douglas fir, and lodgepole pine, and 36,000 acres as nonstocked.

In logging ponderosa pine lands, various degrees of selection have been practiced; the volume of the reserve stands varies accordingly. The usual practice in national forest and Klamath Indian Reservation timber sales has been to remove only the mature, overmature, and suppressed trees, leaving the young and thrifty trees as a reserve stand. As a rule this reserve stand averages from 2 to 5 M board feet per acre. Logging on much of the privately owned land and on the O. and C. grant land has practically amounted to clear cutting, leaving only the unmerchantable trees. Residual-stand conditions on the ponderosa pine cut-over areas are shown, by ownership classes, in table 5.

Table 5. Residual-stand conditions on ponderosa pine cut-over land

Ownership class	Total area	Area having residual stand of--					
		1 M or more per acre		less than 1 M per acre		Area nonstocked	
	Acres	Acres	Percent	Acres	Percent	Acres	Percent
Private	171,090	29,240	17	110,045	64	31,805	19
Indian	147,285	145,280	99	1,960	1	45	
National forest	30,085	26,380	88	3,140	10	565	2
Other public 1/	17,955	3,210	18	10,325	57	4,420	25
Total	366,415	204,110	56	125,470	34	36,835	10

1/ Includes public domain, O. and C. land grant, county, and State.

Reproduction conditions on the ponderosa pine cut-over areas are shown, by ownership classes, in table 6.

Table 6. Reproduction conditions[1] on ponderosa pine cut-over land

Ownership class	Total area	Well stocked		Medium stocked		Poorly stocked		Nonstocked	
	Acres	Acres	Percent	Acres	Percent	Acres	Percent	Acres	Percent
Private	171,090	29,825	17	65,620	38	43,840	26	31,805	19
Indian	147,285	72,590	49	40,900	28	33,750	23	45	
National forest	30,085	5,905	20	18,080	60	5,535	18	565	2
Other public[2]	17,955	1,525	8	7,125	40	4,885	27	4,420	25
Total	366,415	109,845	30	131,725	36	88,010	24	36,835	10

1/ Reproduction includes all trees less than 11.1 inches in d.b.h., i.e., poles, saplings, and seedlings. Classification, in terms of normal stocking, is as follows: Well stocked, 70 to 100 percent; medium stocked, 40 to 69 percent; poorly stocked, 10 to 39 percent; nonstocked, less than 10 percent.

2/ Includes public domain, O. and C. land grant, county, and State.

Most of the areas included in tables 5 and 6 had been cut over within the preceding 10 years. The variations shown in density of reproduction largely reflect variations in density of reproduction stands established before logging. It is anticipated that the reproduction conditions shown will improve with time.

Importance of Forest Industries

The forests of Klamath County are its most valuable natural resource, and their exploitation has been a very important factor in its economic development particularly since 1925.

Industrial development in the county has centered around Klamath Falls, the county seat and principal city. Few cities in the Pacific Northwest have experienced a more rapid growth in recent years. In 1920, according to Bureau of the Census figures, Klamath Falls had a population of 4,801 and was principally a center of livestock raising. By 1930 the population had grown to 16,093, an increase of 235 percent over the 1920 total, and both lumber production and agriculture had become more important than livestock production. Several new sawmills had been built, and the capacity of the existing mills had been increased. Also, box factories and sash and door plants had been added.

These changes were directly due to extensive development of railway facilities. Previous to 1926 the city was served only by a branch line of the Southern Pacific, extending from California. In 1926 the Natron cut-off over the Cascade Range was completed and made the main line of the Southern Pacific. Later the Great Northern extended its line from Bend to Chemult, in the northern part of the county, which is on the Southern Pacific. The Alturas cut-off completed by the Southern Pacific in 1929 gave Klamath Falls a direct connection with the main east-and-west line of the Southern Pacific at Reno, Nevada.

Lumber production in Klamath County was comparatively stable during the decade 1925-34, a period within which the annual lumber production of the Pacific Northwest as a whole varied widely. The county's annual production for the decade averaged 385,121 M board feet, and did not drop off to any great extent in any instance except that of 1932. The production for 1932 was approximately 52 percent of the annual average for the decade. That for 1933 was within 20 percent of the average. Production was greatest in 1929, when it amounted to 507,469 M board feet. (All statements in this paragraph are based on annual lumber-production reports submitted to the Bureau of the Census.)

The number of active sawmills in the county during this decade varied from 14 in 1931 to 25 in 1926. In 1934 there were 23 active sawmills with an aggregate capacity of 1,805 M board feet per 8-hour shift, 6 idle sawmills with a total capacity of 160 M board feet per 8-hour shift, and 1 active shingle mill with a daily capacity of 30 M shingles.

Ponderosa pine made up a little more than 96 percent of the total lumber production of Klamath County for 1925-34. The remainder of the cut consisted principally of Douglas fir, and included a small quantity each of sugar pine, white fir, incense cedar, and white pine. The county's production for that period was approximately 45 percent of the total for the Oregon counties east of the summit of the Cascade Range.

According to Bureau of the Census figures, the number of persons employed in forestry work and the lumber industry in the county in 1930 was 4,527.

Other Forest Uses

In addition to supplying lumber and minor forest products such as fuel wood, fence posts, and farm timbers, the forests of Klamath County are of great economic importance as a protection for the headwaters of streams, as recreational areas, and as grazing areas. Practically all the streams that have their headwaters on forested areas of the county furnish water for irrigation, for electric power, or for both. Forests, streams, and lakes make portions of the county extremely popular as recreation grounds, and thus create a large revenue from visiting tourists, campers, fishermen, and hunters. Most of the cattle and sheep raised in the county graze on forest areas throughout the summer grazing season.

FOREST STATISTICS FOR KLAMATH COUNTY, OREGON
FROM INVENTORY PHASE OF FOREST SURVEY

TABLE 1. VOLUME OF TIMBER BY SPECIES AND BY OWNERSHIP CLASS
DATA CORRECTED TO NOVEMBER 1, 1934

TREES 12" AND MORE IN D.B.H.
THOUSANDS OF BOARD FEET, LOG SCALE, SCRIBNER RULE

SURVEY SYMBOL	SPECIES 1/	PRIVATE	STATE		COUNTY	INDIAN, TRIBAL AND TRUST ALLOTMENTS	FEDERAL					TOTAL
			AVAILABLE FOR CUTTING	RESERVED FROM CUTTING			REVESTED O AND C LAND GRANT	PUBLIC DOMAIN, AVAILABLE FOR CUTTING 2/	CRATER LAKE NAT'L PARK, RESERVED FROM CUTTING	NATIONAL FOREST AVAILABLE FOR CUTTING	NATIONAL FOREST RESERVED FROM CUTTING	
Y	PONDEROSA PINE	6,144,924	42,465	80	5,704	7,132,988	143,410	87,362	168,248	3,261,266	53,301	17,039,748
SP	SUGAR PINE	361,471	5,810			172,872	34,838	225	492	114,802	629	691,139
W	WESTERN WHITE PINE	5,665				3,592	7,050		6,629	149,479	18,438	190,853
LP	LODGEPOLE PINE	8,606			270	3,691	450	309	30,834	165,513	24,541	234,214
DF	DOUGLAS FIR	500,194	10,971		198	35,626	60,973	1,670	4,197	512,817	61,625	1,188,271
H	WESTERN HEMLOCK								5,070	36,925	3,972	45,967
MH	MOUNTAIN HEMLOCK					2,676			166,722	205,810	119,334	494,542
WF	WHITE FIR	514,235	4,663		1,462	311,234	45,012	1,292	22,078	423,046	34,712	1,357,734
NF	NOBLE FIR AND SHASTA RED FIR	71,395				287	69,029	3,330	198,590	579,613	116,264	1,038,508
AF	ALPINE FIR									6,784	3,489	10,273
ES	ENGELMANN SPRUCE								97	21,903	10,769	32,769
IC	INCENSE CEDAR	92,170	1,095		145	10,059	972	689	552	6,208	37	111,927
ASP	ASPEN	1,450								30		1,480
	TOTAL SAW TIMBER	7,700,110	65,004	80	7,779	7,673,025	361,734	94,877	603,509	5,484,196	447,111	22,437,425

TREES 4" AND MORE IN DIAMETER 1' ABOVE GROUND
CORDS

WJ	WESTERN JUNIPER	72,685	5,285		4,795	705	770	117,570		17,230		219,040
MM	MOUNTAIN MAHOGANY	3,430			150	20		770				4,370

1/ IN ADDITION TO THE SPECIES LISTED NORTHERN BLACK COTTONWOOD AND WHITEBARK PINE ARE KNOWN TO OCCUR IN THIS COUNTY, BUT IN NEGLIGIBLE QUANTITIES ONLY.
2/ INCLUDES THE TIMBER ON 40 ACRES OF RAILROAD SELECTION PENDING.

FOREST STATISTICS FOR KLAMATH COUNTY, OREGON
FROM INVENTORY PHASE OF FOREST SURVEY

TABLE 2. AREA, IN ACRES, OF ALL FOREST COVER TYPES, BY OWNERSHIP CLASSES
DATA CORRECTED TO NOVEMBER 1, 1934

SURVEY TYPE NO.	TYPE DEFINITION	PRIVATE	STATE		COUNTY	INDIAN, TRIBAL AND TRUST ALLOTMENTS	FEDERAL						TOTAL
			AVAILABLE FOR CUTTING	RESERVED FROM CUTTING			REVESTED O AND C LAND GRANT	PUBLIC DOMAIN, AVAILABLE FOR CUTTING 1/	NATIONAL PARK, RESERVED FROM CUTTING	WILD-LIFE REFUGE, RESERVED FROM CUTTING	NATIONAL FOREST AVAILABLE FOR CUTTING	NATIONAL FOREST RESERVED FROM CUTTING	
1	BARRENS, CITIES, AND UNMEANDERED WATER SURFACES	5,680	155			125	65	4,455	10,605	5	5,335	1,605	28,030
2	NONFOREST LAND: CULTIVATED, GRASS, SAGEBRUSH, ETC.	508,250	6,460	255	11,325	176,485	500	104,370	365	5,875	62,790	1,150	877,825
4	OAK: FOREST CONTAINING 60% OR MORE OF OAK	180					400	25					605
5A	DENSE JUNIPER: JUNIPER (OR MOUNTAIN MAHOGANY) FOREST OCCUPYING 10% OR MORE OF THE AREA	6,120	565		510			17,275			2,605		27,075
5B	SCATTERED JUNIPER: JUNIPER (OR MOUNTAIN MAHOGANY) FOREST OCCUPYING 5 TO 10% OF THE AREA	35,240	2,480		1,790	480	520	32,325			5,865		78,700
5½	PONDEROSA PINE WOODLAND: SCATTERED STANDS OF PONDEROSA PINE ON UNFAVORABLE SITES	14,315	55		650	16,460	1,480	14,335			11,020		58,315
20.5	PURE PONDEROSA PINE, LARGE: FOREST CONTAINING 80% OR MORE OF PONDEROSA PINE, MORE THAN 22" DBH	391,655	2,800	20	280	430,855	4,505	11,235	5,645		170,635	1,805	1,019,435
20	PONDEROSA PINE, LARGE: FOREST CONTAINING 50 TO 80% OF PONDEROSA PINE, MORE THAN 22" DBH	57,580	290			16,210	6,085	375	1,585		37,555	1,230	120,910
20A	PONDEROSA PINE-SUGAR PINE MIXTURE, LARGE: FOREST CONTAINING 50% OR MORE OF PONDEROSA PINE AND 20% OR MORE OF SUGAR PINE, MORE THAN 22" DBH	9,905				9,365	875				5,745		25,890
20B	SUGAR PINE MIXTURE, LARGE: FOREST CONTAINING 20% OR MORE OF SUGAR PINE AND LESS THAN 50% PONDEROSA PINE, MORE THAN 22" DBH	23,555	625			190	4,595		25		6,570		35,560
21	PONDEROSA PINE, SMALL: 12 TO 22" DBH	30,585			2,015	145,415	435	555	260		36,300	195	215,760
22	PONDEROSA PINE SEEDLINGS, SAPLINGS, AND POLES: LESS THAN 12" DBH	112,635	245	10	2,235	1,970	4,050	4,565	90	10	6,075	15	131,900
27	PINE MIXTURE, LARGE: MIXED FOREST CONTAINING 20 TO 50% OF PONDEROSA PINE 12" OR MORE DBH	16,480	300			5,355	3,825		1,480		19,750	500	47,690
28	PINE MIXTURE, SMALL: MIXED FOREST CONTAINING 20 TO 50% OF PONDEROSA PINE LESS THAN 12" DBH	235									160		395
	DOUGLAS FIR: FOREST CONTAINING 60% OR MORE OF DOUGLAS FIR												
6	DOUGLAS FIR LARGE OLD GROWTH: MORE THAN 40" DBH	775	30				595				3,095	1,210	5,705
7	DOUGLAS FIR SMALL OLD GROWTH: 22 TO 40" DBH	6,485			140		3,720		65		15,940	1,735	28,085
9A	DOUGLAS FIR LARGE POLES: 12 TO 20" DBH	50											50
9B	DOUGLAS FIR SMALL POLES: 6 TO 10" DBH										150		150
10	DOUGLAS FIR SEEDLINGS AND SAPLINGS: LESS THAN 6" DBH						20		40		830		890
	FIR-MOUNTAIN HEMLOCK: FOREST CONTAINING 50% OR MORE OF NOBLE FIR, SHASTA RED FIR, OR MOUNTAIN HEMLOCK, OR OF ANY COMBINATION OF THESE SPECIES												
23	FIR-MOUNTAIN HEMLOCK, LARGE: 12" OR MORE DBH	4,295				250	5,470	215	43,710		130,380	37,870	222,190
24	FIR-MOUNTAIN HEMLOCK, SMALL: LESS THAN 12" DBH	165					900	105	1,010		7,525	1,440	11,145
27½	UPPER-SLOPE MIXTURE, LARGE: MIXED FOREST OF WHITE FIR, DOUGLAS FIR, ENGELMANN SPRUCE, LODGEPOLE PINE, AND WHITE PINE, OR OF ANY COMBINATION OF THESE SPECIES, 12" OR MORE DBH										535	40	575
	WHITE FIR: FOREST CONTAINING 50% OR MORE OF WHITE FIR												
29	WHITE FIR, LARGE: 12" OR MORE DBH	4,615	5			1,445	1,195	150	675		5,620	160	13,865
30	WHITE FIR, SMALL: LESS THAN 12" DBH	275			30				45		640		990
	LODGEPOLE PINE: FOREST CONTAINING 50% OR MORE OF LODGEPOLE PINE												
25	LODGEPOLE PINE, LARGE: 12" OR MORE DBH	2,660			160	235		145	4,795		29,300	360	37,655
26	LODGEPOLE PINE, MEDIUM: 6 TO 10" DBH	107,155	910		2,670	140,550	1,905	33,815	45,005		265,070	10,720	607,800
26A	LODGEPOLE PINE, SMALL: LESS THAN 6" DBH	11,020	70		415	21,450		3,145	3,010		10,365	465	49,940
	HARDWOODS: FOREST CONTAINING 50% OR MORE OF HARDWOODS												
31.5	HARDWOODS, LARGE: 12" OR MORE DBH	400									10		410
31	HARDWOODS, SMALL: LESS THAN 12" DBH	5				35					115		155
33	SUBALPINE: FOREST AT UPPER LIMITS OF TREE GROWTH USUALLY UNMERCHANTABLE	25				5,800			24,435		33,055	19,790	83,105
	NONRESTOCKED CUTOVER: LOGGED AREA NOT SATISFACTORILY RESTOCKED AND NOT CARRYING A RESIDUAL STAND OF I M OR MORE PER ACRE												
35A	CUT SINCE BEGINNING OF 1920	28,650	260		1,050	45	2,380	560			345	40	33,330
35B	CUT BEFORE 1920	3,155			15			155			180		3,505
	DEFORESTED AREA: NONRESTOCKED AREA DEFORESTED OTHERWISE THAN BY CUTTING												
37	DEFORESTED BURN	9,270	150		785	2,625	1,985	3,205	1,115		9,585	730	29,450
37B	AREA ON WHICH STAND HAS BEEN KILLED BY INSECTS	125			115			55					295
38	NONCOMMERCIAL ROCKY AREA	4,400			185	850	2,555	3,160	1,145		4,520	250	17,065
	TOTAL	1,395,940	15,400	285	24,370	976,195	48,060	234,225	145,105	5,890	887,665	81,310	3,814,445

1/ INCLUDES 40 ACRES OF RAILROAD SELECTION PENDING.

FOREST STATISTICS FOR KLAMATH COUNTY, OREGON
FROM INVENTORY PHASE OF FOREST SURVEY

TABLE 3. AREA, IN ACRES, OF GENERALIZED FOREST TYPES, BY OWNERSHIP CLASSES
DATA CORRECTED TO NOVEMBER 1, 1934

TYPE DEFINITION		PRIVATE	STATE: AVAILABLE FOR CUTTING	STATE: RESERVED FROM CUTTING	COUNTY	INDIAN, TRIBAL AND TRUST ALLOTMENTS	FEDERAL: REVESTED O AND C LAND GRANT	FEDERAL: PUBLIC DOMAIN, AVAILABLE FOR CUTTING[1]	FEDERAL: NATIONAL PARK, RESERVED FROM CUTTING	FEDERAL: WILD-LIFE REFUGE, RESERVED FROM CUTTING	FEDERAL: NATIONAL FOREST AVAILABLE FOR CUTTING	FEDERAL: NATIONAL FOREST RESERVED FROM CUTTING	TOTAL
NONFOREST LAND													
SURVEY TYPES 1 AND 2		513,930	6,615	255	11,325	176,610	565	108,825	10,970	5,880	68,125	2,755	905,855
WOODLAND: OAK AND JUNIPER													
SURVEY TYPES 4, 5A, AND 5B		41,540	3,045		2,300	480	920	49,625			8,470		106,380
HARDWOODS: ASPEN													
SURVEY TYPES 31 AND 31.5		405				35					125		565
PONDEROSA PINE AND SUGAR PINE 12" OR MORE DBH													
SURVEY TYPES 5½, 20.5, 20, 21, 27, 20A, AND 20B		544,075	4,070	20	2,945	623,850	21,800	26,500	8,995		287,575	3,730	1,523,560
PONDEROSA PINE AND SUGAR PINE LESS THAN 12" DBH	ON CUTOVER AREAS	110,280	205	10	2,215	1,960	4,040	3,850			3,300	15	125,875
	ON OLD BURNS	2,590	40		20	10	10	715	90	10	2,935		6,420
SURVEY TYPES 22 AND 28	TOTAL	112,870	245	10	2,235	1,970	4,050	4,565	90	10	6,235	15	132,295
CONIFERS 12" OR MORE DBH OTHER THAN PONDEROSA PINE, SUGAR PINE, AND LODGEPOLE PINE													
SURVEY TYPES 6, 7, 9A, 23, 27½, AND 29		16,220	35		140	1,695	10,980	365	44,450		155,570	41,015	270,470
CONIFERS LESS THAN 12" DBH OTHER THAN PONDEROSA PINE, SUGAR PINE, AND LODGEPOLE PINE	ON CUTOVER AREAS	200			30				20		730		980
	ON OLD BURNS	240					920	105	1,075		8,415	1,440	12,195
SURVEY TYPES 9B, 10, 24, AND 30	TOTAL	440			30		920	105	1,095		9,145	1,440	13,175
LODGEPOLE PINE 12" OR MORE DBH													
SURVEY TYPE 25		2,660			160	235		145	4,795		29,300	360	37,655
LODGEPOLE PINE LESS THAN 12" DBH													
SURVEY TYPES 26 AND 26A		118,175	980		3,085	162,000	1,905	36,960	48,015		275,435	11,185	657,740
NONCOMMERCIAL													
SURVEY TYPES 33 AND 38		4,425			185	6,650	2,555	3,160	25,580		37,575	20,040	100,170
NONRESTOCKED CUTOVERS, DEFORESTED BURNS, AND AREAS ON WHICH STANDS HAVE BEEN KILLED BY INSECTS													
SURVEY TYPES 35A, 35B, 37, AND 37B		41,200	410		1,965	2,670	4,365	3,975	1,115		10,110	770	66,580
TOTAL		1,395,940	15,400	285	24,370	976,195	48,060	234,225	145,105	5,890	887,665	81,310	3,814,445

1/ INCLUDES 40 ACRES OF RAILROAD SELECTION PENDING.

FOREST STATISTICS FOR KLAMATH COUNTY, OREGON
FROM INVENTORY PHASE OF FOREST SURVEY

TABLE 4. AREA OF FOREST LAND, BY SITE QUALITY
DATA CORRECTED TO NOVEMBER 1, 1934

TYPE	SITE QUALITY CLASS 1/		AREA			
				PERCENTAGE OF--		
			ACRES	CONIFEROUS FOREST LAND CLASSIFIED AS TO SITE QUALITY	TOTAL FOREST LAND 2/	TOTAL AREA OF COUNTY
PONDEROSA PINE, PONDEROSA PINE MIXTURE, SUGAR PINE MIXTURE, AND WHITE FIR	PONDEROSA PINE	II	5,040	0.3	0.2	0.1
		III	248,654	12.4	8.5	6.5
		IV	1,310,440	65.3	45.1	34.4
		V	169,501	8.4	5.8	4.4
		VI	1,530	0.1	0.1	0.1
			1,735,165	86.5	59.7	45.5
DOUGLAS FIR, FIR-MOUNTAIN HEMLOCK, AND UPPER-SLOPE MIXTURE	DOUGLAS FIR	III	31,855	1.6	1.1	0.8
		IV	97,630	4.9	3.4	2.6
		V	141,135	7.0	4.8	3.7
			270,620	13.5	9.3	7.1
TOTAL			2,005,785	100.0	69.0	52.6
LODGEPOLE PINE			695,690 3/		23.9	18.2
JUNIPER			105,775		3.6	2.8
NONCOMMERCIAL ROCKY AREAS			17,065		0.6	0.5
SUBALPINE			83,105		2.9	2.2
OAK-MADRONE			605			
HARDWOOD			565			
TOTAL			902,805		31.0	23.7
GRAND TOTAL			2,908,590		100.0	76.3

1/ THE "SITE QUALITY" OF A FOREST AREA IS ITS RELATIVE PRODUCTIVE CAPACITY, DETERMINED BY CLIMATIC, SOIL, TOPOGRAPHIC, AND OTHER FACTORS. THE INDEX OF SITE QUALITY IS THE AVERAGE HEIGHT OF THE DOMINANT STAND AT THE AGE OF 100 YEARS. SIX SITE QUALITY CLASSES ARE RECOGNIZED FOR PONDEROSA PINE AND FIVE FOR DOUGLAS FIR, CLASS I BEING IN EACH CASE THE HIGHEST. IN THE SURVEY THE PONDEROSA PINE AND DOUGLAS FIR CLASSIFICATIONS, RESPECTIVELY, WERE USED NOT ONLY FOR TYPES OF WHICH THESE SPECIES ARE CHARACTERISTIC COMPONENTS BUT FOR OTHER TYPES FOR WHICH NO SITE QUALITY CLASSIFICATIONS HAVE BEEN DEVELOPED.

2/ THE COUNTY HAS A TOTAL AREA OF 3,814,445 ACRES, OF WHICH 2,908,590 ACRES (76.3 PERCENT) IS FOREST LAND AND 905,855 ACRES (23.7 PERCENT) IS NONFOREST LAND.

3/ INCLUDES 295 ACRES OF TYPE 37B, AREA ON WHICH STAND HAS BEEN KILLED BY INSECTS.

FOREST STATISTICS FOR KLAMATH COUNTY, OREGON

FROM INVENTORY PHASE OF FOREST SURVEY

FIGURE 1. DISTRIBUTION OF SAW-TIMBER VOLUME BY SPECIES, ALL OWNERSHIP CLASSES (FROM TABLE 1)

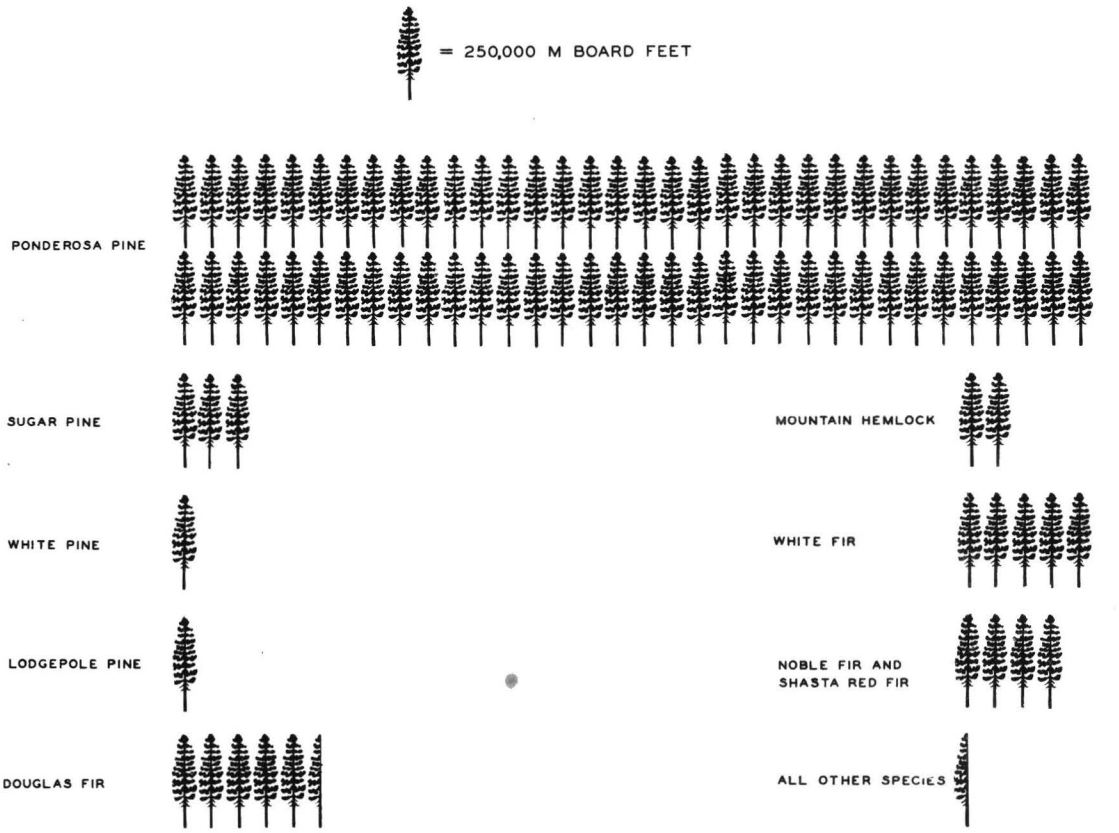

FIGURE 2. OWNERSHIP OF FOREST LAND (FROM TABLE 2)

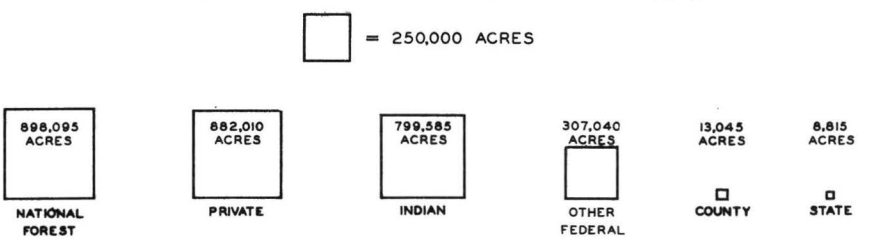

FIGURE 3. DISTRIBUTION OF COUNTY AREA BY GENERALIZED TYPES, ALL OWNERSHIP CLASSES (FROM TABLE 3)